Accommodations Toolkit

Recorded Oral Delivery: Research

This fact sheet on **recorded oral delivery** is part of the *Accommodations Toolkit* published by the National Center on Educational Outcomes (NCEO). It summarizes information and research findings on recorded oral delivery as an accommodation[1]. This toolkit also contains a summary of states' accessibility policies for recorded oral delivery (/nceo/accommodations-toolkit/recorded-oral-delivery-policies).

What is recorded oral delivery? Recorded oral delivery is a form of prerecorded audio delivery of assessments. Common forms of prerecorded oral delivery include audiocassette tapes, CD-ROMs, audio DVDs, screen reader, and other forms of audio file presentations (Harris, 2008; Laitisus, 2010). This accommodation is used as an alternative to a live human reader as a form of oral delivery for an assessment.

What are the research findings on who should use this accommodation? Research has shown that students who benefited from using recorded oral delivery of assessments are elementary and secondary students with learning disabilities (LD) (Helwig et al., 2002; Laitusis, 2010; Tindal, 2002) and secondary students with a visual impairment

(VI) (Erin et al., 2006).

What are the research findings on the implementation of recorded oral delivery? Twelve studies were located that addressed the effects of recorded oral delivery.

- Mixed results were found on the effects of recorded oral delivery for students with disabilities for mathematics assessments. Two studies found there was no difference in performance between the use of recorded oral delivery and no accommodation for elementary and secondary students with various disabilities (Snyder, 2010) and secondary students with and without learning disabilities (Schnirman, 2005). In contrast, two studies found a positive effect with recorded oral delivery. In one study there was increased performance for the accommodated elementary students with LD, but no significant improvement for secondary students with LD compared to students at all grade levels without LD (Helwig, 2002). Similarly, another study of elementary students with various disabilities outperformed secondary students with disabilities when they received prerecorded oral delivery (Tindal, 2002).
- Mixed results were found on the effects of recorded oral delivery for elementary and secondary students with various disabilities for English Language Arts (ELA) assessments. One study found there was no difference in performance between the use of recorded oral delivery and no accommodation for either elementary students with various disabilities or elementary students without disabilities (Kosciolek & Ysseldyke, 2000). A second study found elementary and secondary students with and without learning disabilities performed better with an audio presentation over no accommodation (Laitusis, 2010).
- A study on the use of recorded oral delivery in a science assessment for secondary students with LD (Shelton, 2012) found no difference between students who received the accommodation and those who did not.
- Research was conducted on the use of recorded oral delivery compared to braille in a social studies assessment for secondary students with a visual impairment (Erin, 2006). Results indicated recorded oral delivery did not provide a differential advantage over braille in student performance.
- Five studies compared recorded oral delivery and live oral delivery. Results from all four studies found no difference in secondary students' performance across the two modes on mathematics (Calhoon et al., 2000; Hyunh et al., 2004), reading (Harris, 2008) and science (McMahon et al., 2016) assessments. However, all these studies found an increased performance with either form of the oral delivery accommodation over no accommodation. One study found that the script, inflection, and tone were standardized when prerecorded oral delivery was used when compared to live delivery (human read aloud) helped eliminate construct variance (Shelton, 2012).

What perceptions do students and teachers have about recorded oral delivery? Four studies touched on how teachers and students perceived recorded oral delivery.

- One study examined teacher perceptions of recorded oral delivery for secondary students with reading difficulties on a science assessment. The study found that teachers believed the prerecorded oral delivery of an assessment was more efficient and more feasible than a live oral delivery of an assessment (McMahon et al., 2016).

- Mixed results were found on student perceptions of recorded oral delivery. One study found that perceptions of secondary students with LD were generally positive or neutral on a science assessment (Shelton, 2012). The results from a second study found that elementary students with various disabilities preferred using the accommodation over not using the accommodation in an ELA assessment because it could remove some print reading barriers (Kosciolek & Ysseldyke, 2000).
- One study (Erin et al., 2016) examined perceptions of the recorded oral delivery accommodation compared to braille on a social studies exam for secondary students who had a visually impairment. There were mixed findings. Some students preferred recorded oral delivery while others preferred braille. Some students who preferred the recorded oral delivery perceived it to be a quicker method to complete the exam, while those who preferred braille liked that they could read at their own pace.

What have we learned overall? Overall, research on the recorded oral delivery of assessments provides mixed results on its effectiveness for students with various disabilities across grade levels on the ELA and mathematics assessments. Based on the findings of just two studies, no differences were found in secondary students' performance on science and social studies assessments when they used the recorded oral delivery accommodation. The standardization of recorded oral delivery accommodation has proven to have potential benefits such as removing construct variance around script, tone, speed, and inflection compared to live oral delivery methods. Recorded oral delivery was also generally preferred by both students and teachers when compared to no provision of oral delivery. There has been little research on the impact of the quality of recordings for oral delivery on student performance, and there may be a need for additional research in this area; however, prerecorded audio is not used as much as it once was due to the shift to online assessments that provide oral delivery through the use of text-to-speech technology.

Footnotes

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Research on recorded oral delivery summarized here is also available in NCEO's searchable *Accommodations for Students with Disabilities Bibliography* (https://nceo.info/Resources/bibliographies):(https://nceo.info/Resources/bibliographies) and in NCEO syntheses of research from 1999 through 2017 (see summaries for: 1999-2001 (https://nceo.umn.edu/docs/OnlinePubs/TechReport34.pdf), 2002-2004 (https://nceo.umn.edu/docs/OnlinePubs/Tech45/Technical45.pdf), 2005-2006 (https://nceo.umn.edu/docs/OnlinePubs/Tech47/TechReport47.pdf), 2007-2008 (https://nceo.umn.edu/docs/OnlinePubs/Tech56/TechnicalReport56.pdf), 2009-2010 (https://nceo.umn.edu/docs/OnlinePubs/Tech65/TechnicalReport65.pdf), 2011-2012 (https://nceo.umn.edu/docs/OnlinePubs/Synthesis94/Synthesis94.pdf), 2013-2014 (https://nceo.umn.edu/docs/OnlinePubs/Report402/NCEOReport402.pdf), 2015-2016 (https://nceo.umn.edu/docs/OnlinePubs/NCEOReport412.pdf), 2017 (https://nceo.umn.edu/docs/OnlinePubs/NCEOReport418.pdf), 2018 (https://nceo.umn.edu/docs/OnlinePubs/NCEOReport423.pdf), 2019 (https://nceo.umn.edu/docs/OnlinePubs/NCEOReport433.pdf). See the reports and online bibliography for additional information about the criteria used to identify studies included in this fact sheet.

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